Summary of key points

1 The volume of revolution formed when $y = f(x)$ is rotated about the x-axis between $x = a$ and $x = b$ is given by

$$\textbf{Volume} = \pi \int_a^b y^2 \, dx$$

2 The volume of revolution formed when $x = f(y)$ is rotated about the y-axis between $y = a$ and $y = b$ is given by

$$\textbf{Volume} = \pi \int_a^b x^2 \, dy$$

3 A cylinder of height h and radius r has volume $\pi r^2 h$.

4 A cone of height h and base radius r has volume $\frac{1}{3}\pi r^2 h$.